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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/972,896	10/10/2001	Brian McGuire	033445-002	4470

7590 12/04/2003

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EXAMINER

LYONS, MICHAEL A

ART UNIT	PAPER NUMBER
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2877

DATE MAILED: 12/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/972,896	<b>Applicant(s)</b> MCGUIRE, BRIAN	
	<b>Examiner</b> Michael A. Lyons	<b>Art Unit</b> 2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8, 10, 12 and 13 is/are allowed.
- 6) ☒ Claim(s) 1-7 and 11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

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### DETAILED ACTION

Prosecution on the merits of this application is reopened on claims 1-13, with claims 1-7 and 11 considered unpatentable for the reasons indicated below:

Please see the rejections to follow in light of the Kyrazis patent as disclosed in the applicant's IDS.

Applicant is advised that the Notice of Allowance mailed is vacated. If the issue fee has already been paid, applicant may request a refund or request that the fee be credited to a deposit account. However, applicant may wait until the application is either found allowable or held abandoned. If allowed, upon receipt of a new Notice of Allowance, applicant may request that the previously submitted issue fee be applied. If abandoned, applicant may request refund or credit to a specified Deposit Account.

The indicated allowability of claims 1-7 and 11 is withdrawn in view of the newly discovered reference(s) to Kyrazis as disclosed in the applicant's IDS. Rejections based on the newly cited reference(s) follow.

#### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1, 3, 5, 6, 7, and 11 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Kyrazis (4,589,070).**

Regarding claims 1 and 11, Kyrakis (abstract) discloses a method where a laser is pulsed into the atmosphere from an aircraft, reflections are measured from a pair of distances in front of the aircraft, and, after a processing of the reflected responses in a microprocessor (element 54, Figure 3), determines a windshear condition in front of an aircraft if there is a large difference in the measured velocities at each distance in front of the craft.

As for claim 3, the laser is a single pulsed carbon dioxide laser (abstract).

As for claim 5, the RAM 56 of processor 54 stores the information being processed.

As for claim 6, a complete measurement of the wind velocities may be made in "7.21 microseconds", allowing repetition of the method at intervals of less than ten seconds (Column 7, lines 7-10).

As for claim 7, the abstract of Kyrakis states "both close to the aircraft and at a considerable distance such as one-half mile or a mile away from the aircraft".

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kyrakis (4,589,070).**

As for claim 2, Kyrakis fails to disclose the use of a global positioning system. Official Notice is taken, however, as to the use of a global positioning system for position determination and other necessary functions being well known; therefore, it would have been obvious to one of

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ordinary skill in the art at the time the invention was made to add a global positioning system to the device of Kyrazis to assist in position determination of the aircraft.

As for claim 4, Kyrazis discloses the determination of Doppler shifted frequency (column 5, lines 45-50). However, no Mach-Zehnder interferometer is disclosed, but the use of such an interferometer is a matter of design choice, as the use of such an interferometer will achieve the same result, the measurement of the Doppler shifted frequency, as already occurs in the Kyrazis device.

***Allowable Subject Matter***

**Claims 8-10 and 12-13 are allowed in view of the prior art.**

The following is a statement of reasons for the indication of allowable subject matter:

As to claims 8 and 12, the prior art of record, taken alone or in combination, fails to disclose or render obvious the elements in combination of the claimed system of using wind velocity to detect a windshear or other dangerous condition in the atmosphere in front of an aircraft, in combination with the rest of the limitations of the above claims.

Regarding claims 8 and 12, the prior art fails to disclose or render obvious the use of a pair of Mach-Zehnder interferometers as the first and second comparison means for comparing the delayed optical pulses with the backscattered light in order to make the windshear measurements, in combination with the rest of the elements and limitations of the associated claims.

Regarding claims 10 and 13, the prior art fails to disclose or render obvious the use of a means to provide a third light beam as a sample of the first beam along with a module to delay

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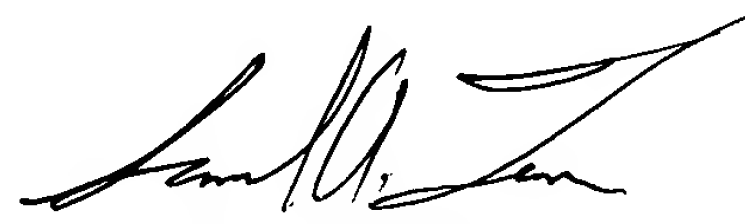
the third beam to correspond to the amount of time for the rest of the light in the system to travel through the system, in combination with the rest of the elements and limitations of the associated claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Lyons whose telephone number is 703-305-1933. The examiner can normally be reached on Monday thru Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G Font can be reached on 703-308-4877. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0935.

MAL  
August 28, 2003



**Samuel A. Turner**  
Primary Examiner